



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,130	12/18/2001	Takashi Mochizuki	Q67762	7342
23373	7590	02/07/2005		
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
			EXAMINER DEAN, RAYMOND S	
			ART UNIT 2684	PAPER NUMBER

DATE MAILED: 02/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/020,130		MOCHIZUKI, TAKASHI	
	Examiner		Art Unit	
	Raymond S Dean		2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed August 27, 2004 have been fully considered but they are not persuasive.

Examiner respectfully disagrees with applicants' assertion on Page 13 1st and 2nd paragraphs of the Remarks that Mohebbi does not teach or suggest an estimation as to which base stations have the likelihood of transmitting user data. Examiner needs to clarify and elaborate on what was stated in paragraph 4 of the Office Action dated May 27, 2004. The mobile terminal comprises a selection information processing portion (48) that compares the downlink signals, of the base stations of the active set, according to a signal quality metric such as received signal strength (RSS) or signal to interference ratio (SIR). The selection processing portion (48) then uses said comparison to determine or estimate which base station has the greatest likelihood of transmitting to the mobile station on the next time slot and ranks said base station accordingly, thus Mohebbi teaches the limitation of estimating as to which base stations have a likelihood of transmitting user data (See Figure 6, Column 6 lines 66 – 67, Column 7 lines 1 – 2, Column 2 lines 64 – 67, and Column 13 lines 1 – 17).

Examiner agrees with applicants' assertion on Page 14 3rd paragraph of the Remarks that Kamel does not teach or suggest estimating at the mobile terminal which base stations have a likelihood of transmitting user data. Kamel, however, does teach a mobile station that participates in soft handoff, in which there will be base stations that

Art Unit: 2684

have a likelihood of transmitting user data. Kamel also teaches a closed loop power control method (See Column 6 lines 26 – 37) that controls transmission power of the downlink signals from the base stations to the mobile station. It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to use the power control method of Kamel in the mobile station of Mohebbi for the purpose enabling said mobile station to receive a particular grade of service (ex. Frame Error Rate) on the downlink as taught by Kamel.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 6 – 8, 10, 19 – 21, and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Mohebbi (US 6,603,971 B1).

Regarding Claim 6, Mohebbi teaches a receiving method for demodulating user data in the downlink signal from base stations to a mobile terminal in a mobile communications system, comprising the steps of: during soft handover, sending notification, from the mobile terminal to the base stations, of the ID of the base station

that is transmitting the downlink signal with the best downlink reception quality (Figure 5, Column 5 lines 46 – 53, Column 6 lines 44 – 48, Column 13 lines 14 – 43); stopping transmission of user data to the mobile terminal from base stations that do not correspond to the base station ID notified by the mobile terminal (Column 13 lines 14 – 43, the base stations that are not selected will not transmit to the mobile station); estimating, at the mobile terminal, which base stations have a likelihood of transmitting user data (Figure 7, Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 7 lines 6 – 10, the ranking of the base stations is the estimation of said base stations likelihood of transmitting user data); and using the downlink signal from these base stations that have a likelihood of transmitting user data, to demodulate, at the mobile terminal, said user data (Figure 7, Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 7 lines 6 – 10, Column 7 lines 11 – 13, the fact that the mobile station receives a traffic channel means that mobile station has the ability to demodulate said traffic).

Regarding Claim 7, Mohebbi teaches all of the claimed limitations recited in Claim 6. Mohebbi further teaches wherein base stations that have a likelihood of transmitting user data are estimated from the estimated uplink reception quality (Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 9 lines 12 – 15, the base station that experiences the best uplink reception quality can be the highest ranked base station).

Regarding Claim 8, Mohebbi teaches all of the claimed limitations recited in Claim 7. Mohebbi further teaches wherein base stations that are estimated to have a likelihood of transmitting user data are base stations at which the estimated uplink

Art Unit: 2684

reception quality is not good. (Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 9 lines 12 – 15, the base station with the lowest ranking can be the base station that experiences a degraded uplink reception quality).

Regarding Claim 10, Mohebbi teaches all of the claimed limitations recited in Claim 6. Mohebbi further teaches wherein a signal obtained by combining a weighted downlink signals from the base stations that have a likelihood of transmitting user data is used for demodulating the user data. (Figure 7, Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 7 lines 6 – 10, Column 13 lines 29 – 34, the ranking of the base stations is the weighting).

Regarding Claim 19, Mohebbi teaches a mobile terminal for receiving user data in the downlink signal from base stations in a mobile communications system, comprising: base station selecting means for selecting, during soft handover, the base station that is transmitting said downlink signal with the best downlink reception quality (Figure 5, Column 5 lines 46 – 53, Column 6 lines 44 – 48, Column 13 lines 14 – 43), and for notifying the base stations of the ID of said base station, so as to cause only the selected base station to transmit user data (Figure 5, Column 5 lines 46 – 53, Column 6 lines 44 – 48, Column 13 lines 14 – 43); downlink signal weight decision means for estimating base stations that have a likelihood of transmitting user data (Figure 7, Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 7 lines 6 – 10, the ranking of the base stations is the weighting); and data demodulating means for using downlink signals from the base stations that have a likelihood of transmitting user data, to demodulate the user data (Figure 7, Column 6 lines 63 – 67, Column 7 lines 1 – 2,

Column 7 lines 6 – 10, Column 7 lines 11 – 13, the fact that the mobile station receives a traffic channel means that mobile station has the ability to demodulate said traffic).

Regarding Claim 20, Mohebbi teaches all of the claimed limitations recited in Claim 19. Mohebbi further teaches wherein said downlink signal weight decision means estimates, from the estimated uplink reception quality, base stations that have a likelihood of transmitting user data (Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 9 lines 12 – 15, the base station that experiences the best uplink reception quality can be the highest ranked base station).

Regarding Claim 21, Mohebbi teaches all of the claimed limitations recited in Claim 20. Mohebbi further teaches wherein a base station that said downlink signal weight decision means estimates as having a likelihood of transmitting user data is a base station at which said estimated uplink reception quality is not good (Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 9 lines 12 – 15, the base station with the lowest ranking can be the base station that experiences a degraded uplink reception quality).

Regarding Claim 24, Mohebbi teaches all of the claimed limitations recited in Claim 19. Mohebbi further teaches wherein said data demodulating means uses the signal obtained by combining the weighted downlink signals from said estimated base stations to demodulate the user data (Figure 7, Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 7 lines 6 – 10, Column 7 lines 11 – 13, the fact that the mobile station receives a traffic channel means that said mobile station has the ability to demodulate said traffic).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 – 5, 9, 11 – 18, 20, and 22 - 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mohebbi (US 6,603,971 B1) in view of Kamel (US 6,628,958 B1).

Regarding Claim 1, Mohebbi teaches during soft handover, sending notification, from said mobile terminal to said base stations, of the ID of the base station that is transmitting said downlink signal with the best downlink reception quality (Figure 5, Column 5 lines 46 – 53, Column 6 lines 44 – 48, Column 13 lines 14 – 43); stopping transmission of user data to the mobile terminal from base stations that do not correspond to the base station ID notified by the mobile terminal (Column 13 lines 14 – 43, the base stations that are not selected will not transmit to the mobile station); estimating, at the mobile terminal, which base stations have a likelihood of transmitting user data (Figure 7, Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 7 lines 6 – 10, the ranking of the base stations is the estimation of said base stations likelihood of transmitting user data).

Mohebbi does not teach a transmission power control method for controlling the transmission power of downlink signals from base stations to a mobile terminal in a

mobile communications system, using the downlink signals from these base stations that have a likelihood of transmitting user data, to decide, at the mobile terminal, whether the transmission power of these base stations is excessive or insufficient; sending information, from the mobile terminal to these base stations, relating to excess or deficiency of their transmission power; and increasing or decreasing the transmission power of these base stations in accordance with this information from the mobile terminal relating to excess or deficiency of their transmission power.

Kamel teaches a transmission power control method for controlling the transmission power of downlink signals from base stations to a mobile terminal in a mobile communications system (Column 6 lines 26 – 37), deciding at the mobile terminal, whether the transmission power of these base stations is excessive or insufficient; sending information, from the mobile terminal to these base stations, relating to excess or deficiency of their transmission power (Column 6 lines 26 – 37); and increasing or decreasing the transmission power of these base stations in accordance with this information from the mobile terminal relating to excess or deficiency of their transmission power (Column 6 lines 26 – 37).

Mohebbi and Kamel both teach a CDMA system that uses soft handoff thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the transmission power control method taught in Kamel in the CDMA system of Mohebbi for the purpose of varying the power output of the base station to maintain a constant frame error rate at the mobile station.

Regarding Claim 2, Mohebbi in view of Kamel teaches all of the claimed limitations recited in Claim 1. Mohebbi further teaches wherein the base stations that have a likelihood of transmitting user data are estimated from the estimated uplink reception quality (Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 9 lines 12 – 15, the base station that experiences the best uplink reception quality can be the highest ranked base station).

Regarding Claim 3, Mohebbi teaches all of the claimed limitations recited in Claim 2. Mohebbi further teaches wherein base stations that are estimated to have a likelihood of transmitting user data are base stations at which said estimated uplink reception quality is not good (Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 9 lines 12 – 15, the base station with the lowest ranking can be the base station that experiences a degraded uplink reception quality).

Regarding Claim 4, Mohebbi teaches all of the claimed limitations recited in Claim 2. Kamel further teaches wherein the estimated uplink reception quality is calculated from the correlation between the increase or decrease in transmission power instructed by the transmission power control, and the increase or decrease in the power of the downlink signal received from a base station (Column 6 lines 26 – 37, the base station that experiences the best uplink reception quality can be the base station selected to lower its transmission power).

Regarding Claim 5, Mohebbi in view of Kamel teaches all of the claimed limitations recited in Claim 1. Mohebbi further teaches wherein a signal obtained by combining a weighted downlink signals from the base stations that have a likelihood of

transmitting user data is used for deciding whether the transmission power of the base stations is excessive or insufficient (Figure 7, Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 7 lines 6 – 10, Column 13 lines 29 – 34, the ranking of the base stations is the weighting).

Regarding Claim 9, Mohebbi teaches all of the claimed limitations recited in Claim 7. Mohebbi does not teach wherein the estimated uplink reception quality is calculated from the correlation between the increase or decrease in transmission power instructed by the transmission power control, and the increase or decrease in the power of the downlink signal received from a base station.

Kamel teaches wherein the estimated uplink reception quality is calculated from the correlation between the increase or decrease in transmission power instructed by the transmission power control, and the increase or decrease in the power of the downlink signal received from a base station (Column 6 lines 26 – 37, the base station that experiences the best uplink reception quality can be the base station selected to lower its transmission power).

Mohebbi and Kamel both teach a CDMA system that uses soft handoff thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the transmission power control method taught in Kamel in the CDMA system of Mohebbi for the purpose of varying the power output of the base station to maintain a constant frame error rate at the mobile station.

Regarding Claim 11, Mohebbi teaches a plurality of base stations, whereof a base station: a) transmits user data when the base station ID that said base station has

received as a notification corresponds to its own ID (Column 5 lines 46 – 53, Column 13 lines 14 – 43; b) stops transmitting user data when said base station ID does not correspond to its own ID (Column 13 lines 14 – 43, the base stations that are not selected will not transmit to the mobile station); at least one mobile terminal which, during soft handover) notifies said base stations of the ID of the base station that is transmitting the downlink signal with the best downlink reception quality (Figure 5, Column 5 lines 46 – 53, Column 6 lines 44 – 48, Column 13 lines 14 – 43); ii) estimates which base stations have a likelihood of transmitting said user data (Figure 7, Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 7 lines 6 – 10, the ranking of the base stations is the estimation of said base stations likelihood of transmitting user data);

Mohebbi does not teach a mobile communications system in which the transmission power of the downlink signal is controlled, increasing or decreasing transmission power in accordance with notified information regarding excess or deficiency of its transmission power, using the downlink signals from the base stations so estimated to decide whether the transmission power of the base stations is excessive or insufficient; and sending information to the base stations informing them that their transmission power is excessive or insufficient.

Kamel teaches a mobile communications system in which the transmission power of the downlink signal is controlled, increasing or decreasing transmission power in accordance with notified information regarding excess or deficiency of its transmission power (Column 6 lines 26 – 37), using the downlink signals from the base stations so estimated to decide whether the transmission power of the base stations is

excessive or insufficient; and sending information to the base stations informing them that their transmission power is excessive or insufficient (Column 6 lines 26 – 37).

Mohebbi and Kamel both teach a CDMA system that uses soft handoff thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the transmission power control method taught in Kamel in the CDMA system of Mohebbi for the purpose of varying the power output of the base station to maintain a constant frame error rate at the mobile station.

Regarding Claim 12, Mohebbi teaches a plurality of base stations, whereof a base station: a) transmits user data when the base station ID that said base station has received as a notification corresponds to its own ID (Column 5 lines 46 – 53, Column 13 lines 14 – 43; b) stops transmitting user data when said base station ID does not correspond to its own ID (Column 13 lines 14 – 43, the base stations that are not selected will not transmit to the mobile station); at least one mobile terminal which, during soft handover) notifies said base stations of the ID of the base station that is transmitting the downlink signal with the best downlink reception quality (Figure 5, Column 5 lines 46 – 53, Column 6 lines 44 – 48, Column 13 lines 14 – 43); ii) estimates which base stations have a likelihood of transmitting said user data (Figure 7, Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 7 lines 6 – 10, the ranking of the base stations is the estimation of said base stations likelihood of transmitting user data); and iii) uses the downlink signals from the base stations so estimated to demodulate said user data (Figure 7, Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 7 lines 6 –

Art Unit: 2684

10, Column 7 lines 11 – 13, the fact that the mobile station receives a traffic channel means that mobile station has the ability to demodulate said traffic).

Mohebbi does not teach a mobile communications system in which the transmission power of the downlink signal is controlled.

Kamel teaches a mobile communications system in which the transmission power of the downlink signal is controlled (Column 6 lines 26 – 37).

Mohebbi and Kamel both teach a CDMA system that uses soft handoff thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the transmission power control method taught in Kamel in the CDMA system of Mohebbi for the purpose of varying the power output of the base station to maintain a constant frame error rate at the mobile station.

Regarding Claim 13, Mohebbi in view of Kamel teaches all of the claimed limitations recited in Claim 11. Mohebbi further teaches wherein said mobile terminal estimates, from the estimated uplink reception quality, base stations that have a likelihood of transmitting user data (Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 9 lines 12 – 15, the base station that experiences the best uplink reception quality can be the highest ranked base station).

Regarding Claim 13, Mohebbi in view of Kamel teaches all of the claimed limitations recited in Claim 12. Mohebbi further teaches wherein said mobile terminal estimates, from the estimated uplink reception quality, base stations that have a likelihood of transmitting user data (Column 6 lines 63 – 67, Column 7 lines 1 – 2,

Column 9 lines 12 – 15, the base station that experiences the best uplink reception quality can be the highest ranked base station).

Regarding Claim 14, Mohebbi teaches all of the claimed limitations recited in Claim 13. Mohebbi further teaches wherein a base station which the mobile terminal estimates to have a likelihood of transmitting user data is a base station at which said estimated uplink reception quality is not good (Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 9 lines 12 – 15, the base station with the lowest ranking can be the base station that experiences a degraded uplink reception quality).

Regarding Claim 15, Mohebbi teaches all of the claimed limitations recited in Claim 13. Kamel further teaches wherein the mobile terminal calculates the estimated uplink reception quality from the correlation between the increase or decrease in transmission power instructed by the transmission power control, and the increase or decrease in the power of the downlink signal received from a base station (Column 6 lines 26 – 37, the base station that experiences the best uplink reception quality can be the base station selected to lower its transmission power).

Regarding Claim 16, Mohebbi in view of Kamel teaches all of the claimed limitations recited in Claim 11. Mohebbi further teaches wherein the mobile terminal uses a signal obtained by combining weighted downlink signals from said estimated base stations, to decide whether the transmission power of the base stations is excessive or insufficient (Figure 7, Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 7 lines 6 – 10, Column 13 lines 29 – 34, the ranking of the base stations is the weighting).

Regarding Claim 17, Mohebbi in view of Kamel teaches all of the claimed limitations recited in Claim 12. Mohebbi further teaches wherein the mobile terminal uses a signal obtained by combining weighted downlink signals from said estimated base stations, to demodulate the user data (Figure 7, Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 7 lines 6 – 10, Column 13 lines 29 – 34, the ranking of the base stations is the weighting).

Regarding Claim 18, Mohebbi teaches a base station selecting means for selecting, during soft handover, the base station that is transmitting said downlink signal with the best downlink reception quality (Figure 5, Column 5 lines 46 – 53, Column 6 lines 44 – 48, Column 13 lines 14 – 43), and for notifying the base stations of the ID of said base station, so as to cause only the selected base station to transmit user data (Figure 5, Column 5 lines 46 – 53, Column 6 lines 44 – 48, Column 13 lines 14 – 43); downlink signal weight decision means for estimating base stations that have a likelihood of transmitting user data (Figure 7, Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 7 lines 6 – 10, the ranking of the base stations is the weighting);

Mohebbi does not teach a mobile terminal that controls the transmission power of the downlink signals from base stations in a mobile communications system, a downlink TPC command decision means for using the downlink signals from base stations that have a likelihood of transmitting user data, to decide whether the transmission power of these base stations is excessive or insufficient, and to instruct an increase or decrease of said transmission power.

Kamel teaches a mobile terminal that controls the transmission power of the downlink signals from base stations in a mobile communications system (Column 6 lines 26 – 37), a downlink TPC command decision means for using the downlink signals from base stations that have a likelihood of transmitting user data, to decide whether the transmission power of these base stations is excessive or insufficient, and to instruct an increase or decrease of said transmission power (Column 6 lines 26 – 37).

Mohebbi and Kamel both teach a CDMA system that uses soft handoff thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the transmission power control method taught in Kamel in the CDMA system of Mohebbi for the purpose of varying the power output of the base station to maintain a constant frame error rate at the mobile station.

Regarding Claim 20, Mohebbi in view of Kamel teaches all of the claimed limitations recited in Claim 18. Mohebbi further teaches wherein said downlink signal weight decision means estimates, from the estimated uplink reception quality, base stations that have a likelihood of transmitting user data (Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 9 lines 12 – 15, the base station that experiences the best uplink reception quality can be the highest ranked base station).

Regarding Claim 22, Mohebbi teaches all of the claimed limitations recited in Claim 20. Mohebbi does not teach wherein the downlink signal weight decision means calculates the estimated uplink reception quality from the correlation between the increase or decrease in transmission power instructed by the transmission power

Art Unit: 2684

control, and the increase or decrease in the power of the downlink signal received from a base station.

Kamel teaches wherein the estimated uplink reception quality is calculated from the correlation between the increase or decrease in transmission power instructed by the transmission power control, and the increase or decrease in the power of the downlink signal received from a base station (Column 6 lines 26 – 37, the base station that experiences the best uplink reception quality can be the base station selected to lower its transmission power).

Mohebbi and Kamel both teach a CDMA system that uses soft handoff thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the transmission power control method taught in Kamel in the CDMA system of Mohebbi for the purpose of varying the power output of the base station to maintain a constant frame error rate at the mobile station.


Regarding Claim 23, Mohebbi in view of Kamel teaches all of the claimed limitations recited in Claim 18. Mohebbi further teaches using the signal obtained by combining the weighted downlink signals from said estimated base stations to decide whether the transmission power of the base stations is excessive or insufficient (Figure 7, Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 7 lines 6 – 10, Column 13 lines 29 – 34, the ranking of the base stations is the weighting).

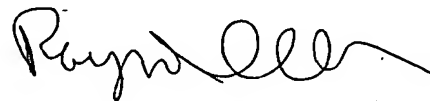
Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S Dean whose telephone number is 703-305-8998. The examiner can normally be reached on 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay A Maung can be reached on 703-308-7745. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


NICK CORSARO
PRIMARY EXAMINER


Raymond S. Dean
January 28, 2005